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IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF
PATENT APPEALS AND INTERFERENCES

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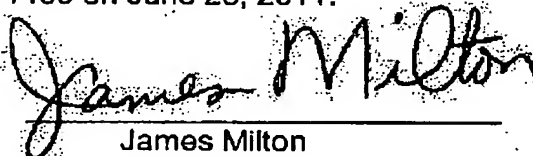
JUN 23 2011

Patent Application

Inventor(s): Deborah L. Barclay et al.
Case No.: LUC-463/Barclay 12-10-6-9-12-2 Examiner: Olumide A. Akonai
Serial No.: 10/768,431 Art Unit: 2617
Filing Date: 1/30/2004
Title: DETERMINATION TO REQUEST MOBILE STATION POSITION
THROUGH EMPLOYMENT OF CALL CHARACTERISTICS

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APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Dear Sir:

This Appeal Brief is submitted in response to the Final Office Action mailed June 14, 2011 in connection with the above-designated application. A Notice of Appeal is filed concurrently with the Appeal Brief via facsimile. A response to the Final Office Action is due September 14, 2011. Therefore, this Response is timely filed. Authorization to pay the Appeal Brief fee is filed concurrently herewith.

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REAL PARTY IN INTEREST

The real party in interest is the assignee of the above-identified application, Lucent Technologies, Inc. now known as Alcatel-Lucent.

RELATED APPEALS AND INTERFERENCES

Appellants, appellants' legal representative, and the assignee of this application do not know of any other appeals or interferences which will directly affect, be directly affected by, or have a bearing on the Board's decision in this appeal.

STATUS OF CLAIMS

Claims 1-20 and 22-26 are pending in the application. Claims 1-20 and 22-26 stand rejected, and the rejection of these claims is being appealed.

STATUS OF AMENDMENTS

No amendments to the claims have been tendered or made following the Final Office Action mailed June 14, 2011.

SUMMARY OF CLAIMED SUBJECT MATTER

An embodiment of the present invention consistent with independent claim 1 is directed to an apparatus comprising:

a network component (FIG. 1; page 3, lines 2-4) operable to employ a) one or more call characteristics to make a determination to initiate a request to a switch component for one or more positions of one or more mobile stations (FIG. 1; page 4, lines 9-12) and b) at least one call parameter to identify one or more cellular network cells associated with the one or more mobile stations (FIG. 1; page 6, lines 15-21),

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wherein the at least one call parameter employed to identify one of the one or more cellular network cells is a telephony number of at least one of the one or more mobile stations; (FIG. 1; page 7, lines 3-5) and

wherein the network component is operable to receive, in response to the request, the one or more positions of the one or more mobile stations from a position component operable to determine the one or more positions of the one or more mobile stations continuously; (FIG. 1; page 8, lines 15-17 and page 9, lines 1-2) and

wherein the network component comprises one of a magnetic data storage medium, an optical data storage medium, a biological data storage medium, or an atomic data storage medium. (FIG. 1; page 12, lines 12-15)

An embodiment of the present invention consistent with independent claim 18 is directed to a method, comprising the steps of:

initiating a request from a network component to a switch component for one or more positions of one or more mobile stations (FIG. 1; page 8, lines 3-5) through employment of a) one or more call characteristics (FIG. 1; page 4, lines 11-12) and b) at least one call parameter to identify one or more cellular network cells associated with the one or more mobile stations (FIG. 1; page 6, lines 15-21), wherein the at least one call parameter employed to identify one of the one or more cellular network cells is a telephony number of at least one of the one or more mobile stations; (FIG. 1; page 7, lines 3-5)

receiving, in response to the request, the one or more positions of the one or more mobile stations; (FIG. 1; page 9, lines 1-2) and

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determining the one or more positions of the one or more mobile stations continuously; (FIG. 1; page 8, lines 15-17)

wherein the network component comprises one of a magnetic data storage medium, an optical data storage medium, a biological data storage medium, or an atomic data storage medium. (FIG. 1; page 12, lines 12-15)

GROUND OF REJECTION TO BE REVIEWED

The grounds of rejection presented for review are:

Claims 1, 18 and 24 were rejected under 35 U.S.C. § 103 (a) as being unpatentable over U. S. Patent Application Number 2002/0025824 issued to Lin dated February 28, 2002 in view of U. S. Patent Number 7,039,403 issued to Wong on May 2, 2006.

Claims 2-17, 19-20, 23 and 25 were rejected under 35 U.S.C. § 103 (a) as being unpatentable over Lin in view of Wong and U. S. Patent Number 6,266,514 issued to O'Donnell on July 24, 2001.

Claim 22 was rejected under 35 U.S.C. § 103 (a) as being unpatentable over Lin in view of Wong and O'Donnell as applied to claim 16, and further in view of U.S. Patent Number 6,233,448 issued to Alperovich et al. on May 15, 2001.

Claim 26 was rejected under 35 U.S.C. § 103 (a) as being unpatentable over Lin in view of Wong and O'Donnell as applied to claim 4, and further in view of U.S. Patent Number 6,832,086 issued to Powers.

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GROUPING OF THE CLAIMS

Claims 1-17 and 22-26 are apparatus claims. Claims 18-20 are method claims. Claims 1 and 18 are independent claims. For purposes of this appeal, patentability of all the claims is derived from claims 1 and 18, and all the claims stand or fall together.

ARGUMENT

The art cited by the Examiner in crafting his rejections fails to address the problem faced by the Appellants. The solution to Appellants' problem can only be found in Appellants' claimed invention. Appellants respectfully submit that the rejections of claims 1-20 and 22-26 as discussed below, are improper.

Rejections Under 35 U.S.C. § 103 (a)

Rejection Under Lin and Wong

Claims 1, 18 and 24 were rejected under 35 U.S.C. § 103 (a) as being unpatentable over U. S. Patent Application Number 2002/0025824 issued to Lin dated February 28, 2002 in view of U. S. Patent Number 7,039,403 issued to Wong on May 2, 2006.

Applicants respectfully traverse this ground of rejection for the following reasons.

First, applicants' claim 1 recites,

"a network component operable to employ a) one or more call characteristics to make a determination to initiate a request to a switch component for one or more positions of one or more mobile stations and b) at least one call parameter to identify one or more cellular network cells associated with the one or more mobile stations, wherein the at least one call parameter employed to identify

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one of the one or more cellular network cells is a telephony number of at least one of the one or more mobile stations; and

wherein the network component is operable to receive, in response to the request, the one or more positions of the one or more mobile stations from a position component operable to determine the one or more positions of the one or more mobile stations continuously; and

wherein the network component comprises one of a magnetic data storage medium, an optical data storage medium, a biological data storage medium, or an atomic data storage medium."

As stated in the Final Office Action, Lin does not teach or suggest "the network component comprises one of a magnetic data storage medium, an optical data storage medium, a biological data storage medium, or an atomic data storage medium". The Examiner proposes to incorporate a network component as taught by Wong into the invention of Lin to achieve applicants' claim 1.

In the rejection of claim 1, the Examiner has equated applicants' "network component" to Lin's "base station that receives positions of cellular phones". See page 5 of the Final Office Action. Also, the Examiner has equated applicants' "network component" to Wong's "HLR that has an optical or magnetic storage device", as stated on page 6 of the Final Office Action. In effect, the Examiner has asserted that applicants' "network component" is a "base station that receives positions of cellular phones" and a "HLR that has an optical or magnetic storage device". This is clearly different from what is claimed in applicants' claim 1, because applicants' claim 1 requires only one network component while the Examiner proposes two different elements to reject claim 1.

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Second, applicants' "network component" cannot be a base station as taught by Lin and a HLR as taught by Lin because the HLR in Wong's network is not equivalent to the base station in Lin's network, so the combination is improper. As known by those skilled in the art, base stations, as used in Lin, are utilized in radio access networks to wirelessly communicate signaling and information content, e.g., conversations, over an air interface, and couple the received signaling and information content to a switch in a wireless network.

By contrast, Wong discloses a MSC that operates as a front end to a network by converting received wireless signals to electrical or optical form to communicate with the HLR. See column 1, lines 49-51. In effect, Wong's HLR communicates over wired or fiber connections. Since the HLR disclosed in Wong does not a) receive information content over an air interface and b) communicate information between a wireless phone and a switch, the HLR cannot be considered equivalent to a base station. Thus, applicants' "network component" cannot be both a base station and a HLR, and the proposed combination is improper.

Third, the proposed combination of Lin and Wong does not reflect the specific limitations recited in applicants' claim 1 since the resultant system would not be a properly functioning system. Specifically, Lin's network component, i.e., base station, is required to wirelessly communicate signaling and information content, e.g., conversations, over an air interface.

By contrast, Wong's network component, i.e., HLR, communicates via electrical or optical connections, as stated hereinabove. Since Lin requires an over the air interface, the system resulting from the proposed combination would not be a properly

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functioning system based on Wong. See MPEP 2143.02 (The Proposed Modification Cannot Change the Principle of Operation of a Reference)

Therefore the proposed combination of Lin and Wong does not teach or suggest all of the limitations in applicants' claim 1, and therefore claim 1 is allowable over the proposed combination. Since claims 2-14, 16-17 and 22-26 depend from allowable claim 1, these claims are also allowable over the proposed combination.

Independent claim 18 has a limitation similar to that of independent claim 1, which, as shown above, is not taught by the proposed combination. For example, claim 18 recites, "wherein the network component comprises one of a magnetic data storage medium, an optical data storage medium, a biological data storage medium, or an atomic data storage medium". The proposed combination does not teach or suggest this limitation for the above-mentioned reasons. Therefore, claim 18 is likewise allowable over the proposed combination. Since claims 19-20 depend from claim 18, these dependent claims are also allowable over the proposed combination.

Rejection Under Lin, Wong and O'Donnell

Claims 2-17, 19-20, 23 and 25 were rejected under 35 U.S.C. § 103 (a) as being unpatentable over Lin in view of Wong and U. S. Patent Number 6,266,514 issued to O'Donnell on July 24, 2001.

Applicants respectfully traverse this ground of rejection for the following reasons.

Applicants' claim 2 recites,

"wherein the network component is operable to perform a comparison of the one or more call characteristics with one or more thresholds to make the

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determination to initiate the request for the one or more positions of the one or more mobile stations.”

As stated in the Final Office Action, Lin and Wong do not teach or suggest this limitation. The Examiner proposes to combine O'Donnell with Lin and Wong to achieve claim 2.

In combining O'Donnell with Lin and Wong, the Examiner proposes to combine two network components that function differently to achieve claim 2. Specifically, to reject claim 2 the Examiner has equated applicants' "network component" to O'Donnell's base station controller that allegedly performs a comparison of the one or more call characteristics, allegedly cited in column 6, lines 6-38. More specifically, O'Donnell discloses, as asserted by the Examiner, that the base station controller invokes the positioning function 8 when a quality measure falls below or above a specified threshold to request the identity and geographic location of a mobile's position. See the rejection of claim 2.

By contrast, in rejecting claim 1 from which claim 2 depends, the Examiner equated applicants' "network component" to Lin's "base station that receives positions of cellular phones". The Examiner has asserted in the rejection of claim 1 that Lin discloses applicants' claim 1 limitation that recites "the network component is operable to receive, in response to the request, the one or more positions of the one or more mobile stations from a position component operable to determine the one or more positions of the one or more mobile stations continuously".

Since Lin's network component allegedly requires the one or more positions of the one or more mobile stations to be determined continuously, and O'Donnell's

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network component requires the geographic location of a mobile's position to be determined when a quality measure falls below or above a specified threshold, the system resulting from the proposed combination would not be a properly functioning system based on Lin. See MPEP 2143.02 (The Proposed Modification Cannot Change the Principle of Operation of a Reference)

Since claims 3-5 and 23 depend from claim 2, these dependent claims are also allowable over the proposed combination.

Claims 6-17, 19-20 and 25 were also rejected based on Lin in view of Wong and O'Donnell. Applicants assert that these claims are allowable over the proposed combination for the same reasons as stated hereinabove.

Rejection Under Lin, Wong, O'Donnell, Alperovich and Powers

Claim 22 was rejected under 35 U.S.C. § 103 (a) as being unpatentable over Lin in view of Wong and O'Donnell as applied to claim 16, and further in view of U.S. Patent Number 6,233,448 issued to Alperovich et al. on May 15, 2001.

Claim 26 was rejected under 35 U.S.C. § 103 (a) as being unpatentable over Lin in view of Wong and O'Donnell as applied to claim 4, and further in view of U.S. Patent Number 6,832,086 issued to Powers.

Applicants respectfully traverse these grounds of rejection.

These rejections are based on the rejection under Lin and Wong being proper. As that ground of rejection has been overcome, and none of the cited references teach or suggest "wherein the network component comprises one of a magnetic data storage medium, an optical data storage medium, a biological data storage medium, or an

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atomic data storage medium", as recited in applicants' independent claims 1 and 18, the proposed combinations of Lin, Wong, O'Donnell, Alperovich and Powers does not supply these missing elements. Thus, these combinations do not make obvious any of applicants' claims, all of which require the aforesaid limitation.

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CLAIMS APPENDIX

1 1. (Previously presented) An apparatus, comprising:

2 a network component operable to employ a) one or more call characteristics to
3 make a determination to initiate a request to a switch component for one or more
4 positions of one or more mobile stations and b) at least one call parameter to identify
5 one or more cellular network cells associated with the one or more mobile stations,
6 wherein the at least one call parameter employed to identify one of the one or more
7 cellular network cells is a telephony number of at least one of the one or more mobile
8 stations; and

9 wherein the network component is operable to receive, in response to the
10 request, the one or more positions of the one or more mobile stations from a position
11 component operable to determine the one or more positions of the one or more mobile
12 stations continuously; and

13 wherein the network component comprises one of a magnetic data storage
14 medium, an optical data storage medium, a biological data storage medium, or an
15 atomic data storage medium.

1 2. (Previously presented) The apparatus of claim 1, wherein the network
2 component is operable to perform a comparison of the one or more call characteristics
3 with one or more thresholds to make the determination to initiate the request for the one
4 or more positions of the one or more mobile stations.

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1 3. (Previously presented) The apparatus of claim 2, wherein the one or more
2 call characteristics comprise a pilot signal strength characteristic, and wherein the one
3 or more thresholds comprise a pilot signal strength threshold, and wherein the network
4 component is operable to perform a comparison of the pilot signal strength
5 characteristic with the pilot signal strength threshold; and

6 wherein the network component makes the determination to initiate the request
7 for the one or more positions of the one or more mobile stations based on a result of the
8 comparison of the pilot signal strength characteristic with the pilot signal strength
9 threshold.

1 4. (Previously presented) The apparatus of claim 2, wherein the network
2 component is operable to employ the one or more call characteristics to create one or
3 more call statistics, and wherein the one or more thresholds comprise one or more call
4 characteristic thresholds and one or more call statistic thresholds; and

5 wherein the network component is operable to perform a comparison of the one
6 or more call statistics with the one or more call statistic thresholds; and

7 wherein the network component is operable to employ a comparison of the one
8 or more call characteristics with the one or more call characteristic thresholds and the
9 comparison of the one or more call statistics with the one or more call statistic
10 thresholds to make the determination to initiate the request.

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1 5. (Previously presented) The apparatus of claim 2, wherein the network
2 component comprises an interface, and wherein the network component is operable to
3 receive the one or more thresholds from a service provider through employment of the
4 interface.

1 6. (Previously presented) The apparatus of claim 1, wherein the network
2 component is operable to employ the determination to initiate the request to promote an
3 avoidance of congestion in one or more cellular network communication paths.

1 7. (Previously presented) The apparatus of claim 6, wherein the network
2 component makes the determination to initiate the request upon an exceedance of the
3 one or more call characteristics relative to one or more thresholds; and
4 wherein upon the exceedance of the one or more call characteristics relative to
5 the one or more thresholds, the network component and the position component are
6 operable to cooperate to obtain the one or more positions of the one or more mobile
7 stations.

1 8. (Previously presented) The apparatus of claim 7, wherein upon a
2 termination of the exceedance of the one or more call characteristics relative to the one
3 or more thresholds, the network component and the position component are operable to
4 cooperate to discontinue attainment of the one or more positions of the one or more
5 mobile stations.

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1 9. (Previously presented) The apparatus of claim 1, wherein the network
2 component is operable to employ the one or more call characteristics to perform a
3 selection of the one or more mobile stations from a plurality of mobile stations; and
4 wherein the network component is operable to employ the selection to formulate
5 the request for the one or more positions of the one or more mobile stations from the
6 plurality of mobile stations.

1 10. (Previously presented) The apparatus of claim 1, wherein the one or more
2 mobile stations are associated with the one or more cellular network cells; and
3 wherein the network component is operable to employ the one or more call
4 characteristics to perform a selection of the one or more cellular network cells from a
5 plurality of cellular network cells; and
6 wherein the network component is operable to employ the selection to formulate
7 the request for the one or more positions of the one or more mobile stations that are
8 associated with the one or more cellular network cells.

1 11. (Previously presented) The apparatus of claim 10, wherein the network
2 component is operable to employ the switch component to identify the one or more
3 mobile stations that are associated with the one or more cellular network cells; and
4 wherein the network component is operable to employ the switch component to
5 determine the one or more positions of the one or more mobile stations that are
6 associated with the one or more cellular network cells.

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1 12. (Previously presented) The apparatus of claim 1, wherein the network
2 component is operable to receive the one or more positions of the one or more mobile
3 stations in response to the request; and

4 wherein the network component is operable to employ the one or more positions
5 of the one or more mobile stations and the one or more call characteristics to develop a
6 coverage map.

1 13. (Previously presented) The apparatus of claim 1, further comprising:
2 the switch component that is operable to provide the one or more call
3 characteristics to the network component;

4 wherein the network component is operable to employ the one or more call
5 characteristics to make a determination to initiate a request to the switch component;
6 and

7 wherein the switch component is operable to obtain the one or more positions of
8 the one or more mobile stations based on the request to the switch component.

1 14. (Previously presented) The apparatus of claim 13, wherein the network
2 component is operable to provide to the switch component the at least one call
3 parameter; and

4 wherein the switch component is operable to employ the at least one call
5 parameter to perform an identification of the one or more mobile stations from a plurality
6 of mobile stations; and

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7 wherein the switch component is operable to employ the identification of the one
8 or more mobile stations from the plurality of mobile stations to obtain the one or more
9 positions of the one or more mobile stations.

1 15. (Previously presented) The apparatus of claim 14, wherein the one or
2 more mobile stations are associated with one or more calls; and

3 wherein the switch component is operable to employ the at least one call
4 parameter to perform an identification of the one or more calls from a plurality of calls;
5 and

6 wherein the switch component is operable to employ the identification of the one
7 or more calls from the plurality of calls to obtain the one or more positions of the one or
8 more mobile stations that are associated with the one or more calls.

1 16. (Previously presented) The apparatus of claim 13, wherein the network
2 component and the switch component are operable to receive the one or more positions
3 of the one or more mobile stations from the position component; and

4 wherein the network component and the switch component are operable to
5 cooperate to develop a coverage map through employment of the one or more positions
6 of the one or more mobile stations.

1 17. (Previously presented) The apparatus of claim 16, wherein the position
2 component is operable to employ one or more of an Enhanced Forward Link
3 Trilateration algorithm and an IS-801 solution using an Assisted Global Positioning
4 System (AGPS), Advanced Forward Link Trilateration (AFLT) or combined AGPS/AFLT
5 algorithm to determine the one or more positions of the one or more mobile stations.

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1 18. (Previously presented) A method, comprising the steps of:

2 initiating a request from a network component to a switch component for one or
3 more positions of one or more mobile stations through employment of a) one or more
4 call characteristics and b) at least one call parameter to identify one or more cellular
5 network cells associated with the one or more mobile stations, wherein the at least one
6 call parameter employed to identify one of the one or more cellular network cells is a
7 telephony number of at least one of the one or more mobile stations;

8 receiving, in response to the request, the one or more positions of the one or
9 more mobile stations; and

10 determining the one or more positions of the one or more mobile stations
11 continuously;

12 wherein the network component comprises one of a magnetic data storage
13 medium, an optical data storage medium, a biological data storage medium, or an
14 atomic data storage medium.

1 19. (Previously presented) The method of claim 18, wherein the step of

2 initiating the request from the network component to the switch component for the one
3 or more positions of the one or more mobile stations through employment of the one or
4 more call characteristics further comprises the steps of:

5 performing a comparison of the one or more call characteristics with one or more
6 thresholds; and

7 initiating the request for the one or more positions of the one or more mobile
8 stations based on the comparison.

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1 20. (Previously presented) The method of claim 19, wherein the step of
2 initiating the request from the network component to the switch component for the one
3 or more positions of the one or more mobile stations based on the comparison further
4 comprises the steps of:

5 determining the at least one call parameter associated with the one or more
6 thresholds;

7 Identifying the one or more mobile stations from a plurality of mobile stations
8 through employment of the at least one call parameter; and

9 initiating the request for the one or more positions of the one or more mobile
10 stations through employment of the at least one call parameter.

1 21. (Canceled)

1 22. (Previously presented) The apparatus of claim 16, wherein the position
2 component is pre-provisioned with one or more intervals of time to determine the one or
3 more positions of the one or more mobile stations.

1 23. (Previously presented) The apparatus of claim 5, wherein the thresholds
2 provide a measure of a quality level of service provided to the one or more mobile
3 stations.

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1 24. (Previously presented) The apparatus of claim 1, wherein the network
2 component is operable to employ the at least one call parameter to identify i) the one or
3 more cellular network cells associated with the one or more mobile stations or ii) the
4 one or more mobile stations.

1 25. (Previously presented) The apparatus of claim 1, wherein the network
2 component is operable to limit a number of requests for the one or more positions of the
3 one or more mobile stations based on a comparison of the one or more call
4 characteristics with one or more thresholds.

1 26. (Previously presented) The apparatus of claim 4, wherein one of the one
2 or more call statistics is a number of dropped calls within an hour.

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EVIDENCE APPENDIX

Not applicable.

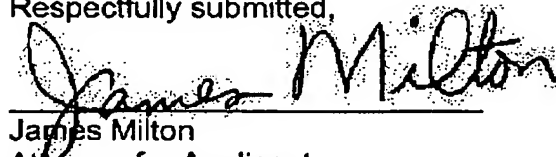
RELATED PROCEEDINGS APPENDIX

Not applicable.

Conclusion

In view of the foregoing, it is submitted that the Examiner is in error. It is, accordingly, respectfully requested that the rejection of claims 1-20 and 22-26 be reversed and the application passed to issue.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "James Milton", is written over a horizontal line.

James Milton
Attorney for Applicant
Reg. No. 46,935

Dated: June 23, 2011

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